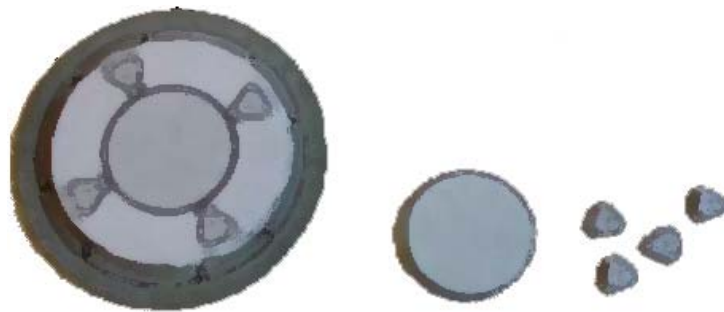


Materials

- White, unlined copy paper
- White, cardstock paper
- Small piece of cardboard (for example: 13 centimeters x 13 centimeters)
- Scissors
- Glue stick
- Glue
- Tape
- 2 clear straws (not the bendable kind)
- 1 straight pin
- 4 pennies
- X-acto® knife or straight razor
- Stapler
- Single hole puncher
- Color printer (optional)

Procedures

1. Using a color printer, print out each template on the proper type of paper:
 - a. Cardstock: Template 1
 - b. Paper: Template 2 and 3
2. Use scissors to cut out the Avionics Bay Interior Wall, the ATV Hatch, the Cargo Carrier Interior Wall, and the Thruster Main Support.
3. Use the glue stick to attach them to the cardboard.
4. While it is drying, use scissors to cut out the Thruster Secondary Support, Thruster Cap, and Thruster Mountings.



5. Once the pieces on the cardboard are dry, use the X-acto® knife to cut them out. Hint: cut away the white around each piece.

6. Lay the Thruster Main Support on the table. Use the glue stick to attach the Thruster Secondary Support to it. Be sure the arrows are aligned.
7. Attach the Thruster Cap to the Thruster Secondary Support with the glue stick.
8. Carefully attach the Thruster Mountings to the triangular shapes on the Thruster Secondary Support (these are labeled with an X). Set aside to allow time for the glue to dry.
9. Cut out the Cargo Carrier. Bend it around the Cargo Carrier Interior Wall to form a cylinder. Use the glue stick to attach the tab of the Cargo Carrier to itself. Use regular glue to attach the Cargo Carrier Interior to the Cargo Carrier. The Cargo Interior Wall should be placed near the end with the “teeth”. The back of the interior wall (blank cardboard) should be facing towards the “teeth” of the cargo carrier.

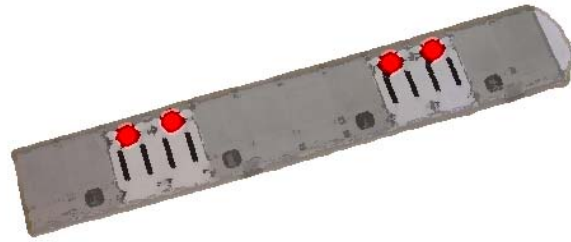


10. Carefully cut out the Avionics Bay. Bend it into a cylinder around the Avionics Bay Interior Wall. Use the glue stick to attach the Avionics bay to itself, and the regular glue to hold the Avionics Bay inside. The Avionics Bay should be placed just below the “teeth” with the interior wall facing towards the “teeth”.



11. Cut out the Propulsion Module.

Using the hole punch, make four holes, as labeled by the four striped boxes. The holes should be about the same size as the straw. If you have smaller or larger straws than what the hole punch can do, use the pointed end of the scissors to carefully enlarge the hole (or to make your own).



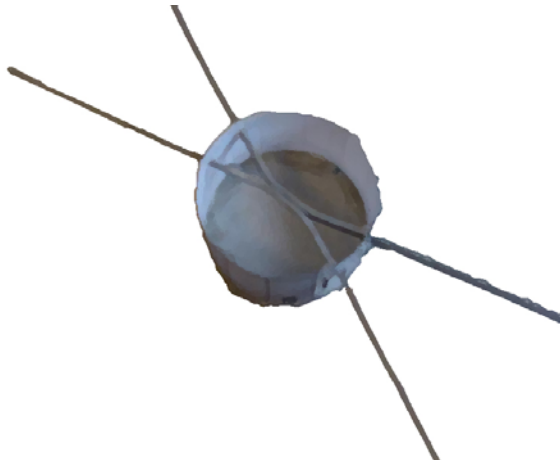
12. Bend the Propulsion Module into a cylinder around the Thruster Support. Use the glue stick to hold the module together, and regular glue to hold the Thruster Support to the module. Attach the Thruster Support on the opposite end from the holes you just made.



13. Attach the Cargo Carrier to the Avionics Bay. Bend the “teeth” of the Cargo Carrier slightly to fit inside the smooth end (dark gray stripe) of the Avionics Bay. Place small drops of glue on, or rub the glue stick over, the “teeth” to hold the Cargo Carrier in place.

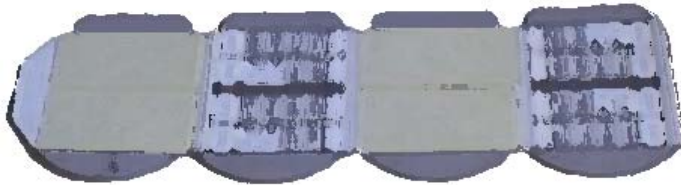


14. Insert the straws into the holes of the Propulsion Module. Try to make each straw have an equal amount of it showing outside. The straws will not cross in the middle. Instead, bend them together and staple them twice.

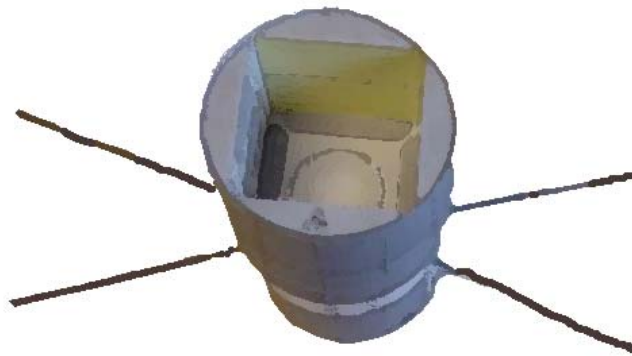


15. Cut out the Solar Array Supports. Glue two to each support. Allow glue to dry.

16. Cut out the ATV Interior piece. Fold the curved pieces to make a 90-degree angle. Fold the interior to make a box. Use the glue stick to attach the tab. Slightly bend the four straight tabs on the bottom. Warning: do not over bend them. Allow the glue to dry.



17. Slightly bend the “teeth” on the Avionics Bay. Insert those “teeth” into the open end of the Propulsion Module. Place small drops of glue on, or rub the glue stick over, the “teeth” to hold the Avionics Bay in place. Allow glue to dry.
18. Place the ATV Interior inside of the Cargo Carrier. Put a small bit of glue on the curved tabs. When looking down through the ATV Interior, you should see the Cargo Carrier Interior Wall at the bottom. The four straight tabs at the bottom should just be touching the interior wall.

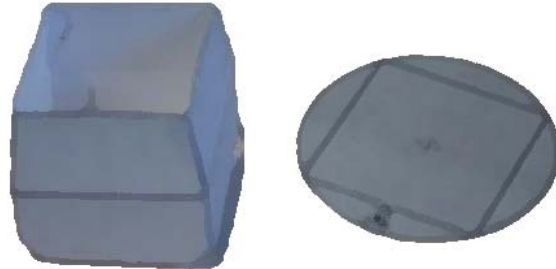


19. Cut out the ATV Front End. Be sure to remove the white wedge. Form it into a cone and use the glue stick to hold it. Alternative, you can use tape on the inside to hold this together.
20. Carefully cut out the ATV Hatch Cone. Place glue on the “teeth” on the side that has the two gray ovals. Attach the ATV Hatch Cone to the ATV Front End.
21. Take the straight pin, and push it into the center of the ATV Hatch. Be very careful, so as not to stick yourself with the pin. Push it in far enough so the pin just enters the ATV Front end. There should be at least 1-2 centimeters of pin sticking out the top.



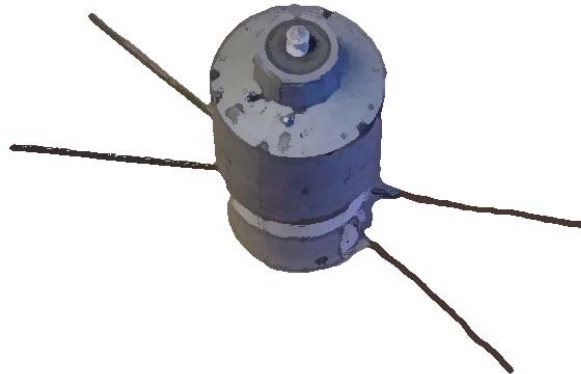
22. Place glue on the “teeth” of the ATV Hatch Cone and push the pin into the top of the ATV Front End. The ATV Hatch should be resting just inside the ATV Hatch Cone. Allow the glue to dry.

23. Cut out the Adapter and Adapter Plate. Leave the small white wedges on the Adapter sides (this will help you attach the tabs together). Make a box with the Adapter and use the glue stick or tape to hold it together. Bend the small tabs to a 90-degree angle. Put glue on the tabs and attach the Adapter to the Adapter Plate, with the colored side of the plate showing up through the Adapter. Carefully glue the large tabs of the Adapter together using the white wedges. Allow the glue to dry.



24. Glue the ATV Front End to the Adapter Plate. Try not to use too much glue since it may run over onto the Adapter.

25. Carefully place the Adapter down inside the ATV Interior. You should have the basics for your Jules Verne ATV.



26. Setting it on its side. The last piece to attach is the Thruster Nozzles.

27. Cut out the four Thruster Nozzles. They are all not complete circles, but that does not matter.

28. Cut out the triangle wedge from the center of each. Bend each nozzle into a cone, but this time, wrap it very, very tight. Keep twisting and twisting until you get a nozzle shape. Use small pieces of tape to hold it together.

29. Since the nozzle will have a very sharp point, cut it off about half way up the white portion. Using the glue, put a drop on each Thruster Mounting. Hold each Thruster Nozzle in place until it is dry enough stand on its own.

30. To complete the look of your ATV, you need to attach the Solar Arrays. Cut each of them out and put a single piece of tape across the purple side. This will simulate the glossy look of the glass on the Solar Arrays.

31. Attach one Solar Array to each straw. Due to the variable length of straws, you may need to cut the straws first, so they do not stick out past the Solar Array.



32. Your Jules Verne ATV is now complete. To properly display your new spacecraft, continue with the instructions to build a stand to hold it.

33. Cut out each piece of the ATV stand.

34. Attach the “ATV” and the “Scale of this model” sections together. Fold the striped tabs out to make a 90-degree angle. You can use tape or the glue stick to hold them together.



35. Use the X-acto® knife to cut out the three small boxes in the grid patterned rectangle.

36. Cut out the two “ice cream cones”. Leave some paper all the way around to be removed later. Put some glue on the back of each gray triangular piece. Using the centerline, fold them together.



37. Cut away the extra white all the way around. Cut away the “ice cream” part of the cone. Be sure to leave the three tabs.

38. Bend the rectangle so the three tabs on the “cone” fit into the three boxes you cut out. Use the tape to fold the tabs over on the rectangle. Glue the top of the rectangle onto the folded tabs.



39. Fold the three tabs up to a 90-degree angle on the “copyright” piece. Tape one penny into each corner, and one penny in the center.
40. Use the glue stick to cover the three tabs. Carefully insert the base into the holder.
41. Use the scissors to cut the two lines out of the stand. Insert the triangle holder into the stand in-between the lines you just cut out.
42. Set your Jules Verne ATV on top of it and display it proudly.

